

EXPLANATION OF PLATE VII.

- Fig. 1. *Ctenus Thomasi*, sp. n., ♀. Vulva.
 Fig. 2. Ditto. Ventral surface of abdomen.
 Fig. 3. *Ctenus unilineatus*, E. Simon, ♂. Tibia of palpus from outside.
 Fig. 4. Ditto. Tarsus of palpus from beneath.
 Fig. 5. Ditto, ♀. Vulva.
 Fig. 6. *Ctenus falcatus*, sp. n., ♂. Tibia of pedipalp from outside.
 Fig. 7. Ditto, ♀. Vulva.
 Fig. 8. *Ctenus Ellucomei*, sp. n., ♀. Vulva.
 Fig. 9. *Ctenus tarsalis*, sp. n., ♀. Vulva.
 Fig. 10. *Ctenus calcarifer*, sp. n., ♂. Tibia and tarsus of pedipalp from beneath.
 Fig. 11. *Ctenus vertebratus*, sp. n., ♀. Vulva.
 Fig. 12. *Ctenus cuspidatus*, sp. n., ♂. Bulb of palpus.
 Fig. 13. Ditto. Tibia of pedipalp, showing apical spur.
 Fig. 14. *Ctenus ceylonensis*, F. Cb. Tibia of pedipalp, showing apical spur.

LXV.—*New Species of Eastern and Australian Heterocera.*
 By Colonel C. SWINHOE, M.A., F.L.S., &c.

Family Microniidæ.

Urapteroides approximans, nov.

♂ ♀. Allied to *A. geminia*, Cram., but with darker bands and borders; the costa of fore wings in the male is broadly chocolate-brown, thickly striated and marked with dark brown and with a few white marks; in the female it is white, with striations of dark chocolate-brown; the outer marginal band in both sexes on the fore wings and the submarginal band of the hind wings are broadly chocolate-brown, complete in the male, suffused towards anal angle in the female, and in this sex the costal and marginal bands of the fore wings are much attenuated at the apex; the inner bands are much as in *geminia*.

Expanse of wings, ♂ $2\frac{1}{2}$, ♀ 3 inches.

Shortland Island, Key Island.

There are some specimens in the B. M. over Warren's MS. name as above.

Family Boarmiidæ.

Subfamily PLUTODINÆ.

Tusta reflexa, nov.

♂ ♀. Of a uniform purple mouse-colour: fore wings with

a pale marginal band containing a row of glistening sub-marginal leaden-coloured spots : hind wings with a broader marginal pale space, containing a nearly upright ocellus, slightly inclining outwards, with some glistening leaden spots above and below it ; the ocellus is black, ringed with yellow ; cilia purplish grey, shining. Underside leaden white, with a broad purplish-grey band to both wings and glistening purplish-grey cilia.

Expanse of wings $1\frac{2}{10}$ inch.

Khasia Hills ; many examples.

There is a female from Bhutan in the B. M.

This form differs from *T. micaceata*, Walker, = *iridis*, Butler, from Borneo, chiefly in the position of the ocellus of the hind wings, which has a strongly inward incline, and is consequently nearer to the margin ; it is also not so white below and has more or less distinctly a central grey band or fascia.

There are examples in the B. M. from Sarawak, Singapore, and Penang of *iridis*.

Peratophyga venetia, nov.

♂. Dull ochreous : fore wings with basal third and outer third purplish fuscous ; in some examples the two bands are joined together by a narrow band on the hinder margin ; the outer edge of the inner band is nearly erect and well defined ; the inner edge of the outer band is sinuous, as in *P. arata*, Moore, from India, but this band is nearly twice as broad : on the hind wings the outer band corresponds in width to that on the fore wings ; the inner band is only faintly indicated and in some examples is obsolete ; the yellow portions of the wing, including the costa inside of the outer band, is irrorated with purplish atoms, sometimes dotted with fine black points, making its ochreous colour very dull.

Expanse of wings $1\frac{2}{10}$ inch.

Gopong, Perak (*Kunstler*).

There are in the B. M. unnamed examples from Singapore, Sandakan, and Sarawak.

Subfamily *ENNOMINÆ*.

Hypochrosis languidata, nov.

♂ ♀. Dark olive-green, the female with a dull yellowish central fascia from middle of abdominal margin of hind wings to apex of fore wings ; this fascia is covered with brown irrorations and is but very faintly indicated in the male ;

there is a large black spot at end of cell of fore wings, a transverse thin brown band or thick line, nearly straight and even, on the outer side of the fascia; this line has a little curved white mark on its outer side at the apex and a thin white outer edging, and the space beyond on both wings and the costal space on the fore wings in the female is suffused with chocolate-brown; the male is uniform olive-green. The underside in both sexes, including body and legs, is of a nearly uniform bright scarlet-orange colour; a brown spot at end of cell of fore wings; a thick black line from near centre of hinder margin to apex, where there is a white spot.

Expanse of wings, ♂ $1\frac{8}{10}$, ♀ 3 inches.

Goping, Perak (*Kunstler*).

Subfamily *BOARMINÆ*.

Buzura eximia, nov.

♂. Antennæ brown; top of head, thorax, and pectus dark ochreous; abdomen and both wings dull pale ochreous, wings covered with black irrorations: fore wings with two small black patches on the costa at one third and two thirds from base; below the former is a short black thin band, bent inwards on the hinder margin, with a black spot on its inner side; an outer macular band, dull pale black, from the hinder margin close to the angle, terminating in a curve on to the outer margin above the middle: hind wings with a dull suffused blackish shade from the middle of the abdominal margin; a short black line from near anal angle and indications of a marginal, dull ochreous, rather broad band, containing a pale whitish, sinuous, submarginal line, more or less apparent also on fore wings. The underside is like the upper, the irrorations more dense, and also a large blackish spot at end of each cell.

Expanse of wings $2\frac{9}{10}$ inches.

Nias (*Barman*).

Family *Syntomidæ*.

Syntomis amœnaria, nov.

♂. Frons, head, collar, sides of thorax, and abdomen dark ochreous; centre of thorax and segmental bands on abdomen black. Wings black, spots dark ochreous: fore wings with a round spot one fifth from base, a long oval spot in the cell, another below with its inner edge below centre of cell, its outer edge near hinder angle; two subapical spots—a long one, with a short one above it; a long spot above the middle

near the outer margin, with a dot below it: hind wings with the basal third dark ochreous, with rounded outer margin and with a round spot beyond it in the disk.

Expanse of wings $1\frac{2}{10}$ inch.

Roebourne, W. Australia (*Clement*); three examples.

It may be a subspecies of *S. Clementi*, Hmps., of which I have received several hundreds from the same locality; but *Clementi* has in place of the lower medial spot on fore wings two large spots conjoined, forming with the subcostal spot above almost a complete medial band; the discal and marginal spots are much larger, and all the centre portion of the hind wing is ochreous.

Family Linnacodidæ.

Thosea erecta, nov.

♂ ♀. Frons ochreous; head, body, and fore wings bright dark chestnut-red; a white central straight band slightly inclining outwards; a grey marginal broad band, which in the male continues thinly along the hinder margin to the central band and also along the costal line in some examples; in other male examples the outer half of the wing is pale, in which there is a large oval, slightly darker space, with a dark red patch in its centre: hind wings paler red, unmarked. Underside uniform pale red, without markings.

Expanse of wings, ♂ $1\frac{8}{10}$, ♀ 1 inch.

Roebourne, W. Australia (*Clement*); many examples.

There are five pairs in the B. M. from the Sherlock River, also collected by Clement.

Family Lymantriidæ.

Doratifera unicolora, nov.

♂ ♀. Of a uniform bright chestnut-red, the female somewhat paler and tinged with ochreous; frons and top of head pale; some pale ochreous-red hairs on the body: fore wings of the male irrorated with minute white atoms; costal and outer borders dark chestnut, no markings. Underside with the thorax and fore wings and upper half of hind wings red, lower half pale; legs red, tarsi pale.

Expanse of wings $1\frac{1}{10}$ inch.

Rockhampton, Roebourne, W. Australia (*Clement*).

Type ♂, Rockhampton, in B. M.

Type ♀, Roebourne, in Coll. Swinhoe.

Darala adriana, nov.

♂. Shaft of antennæ pale pinkish white, plumes black; head, body, and wings of a nearly uniform dull chestnut-brown; the fore part of the thorax and the marginal spaces of both wings are slightly darker than the general coloration, and the hind wings are perhaps a little paler than the fore wings, but there are absolutely no markings except some pale pinkish-white spots in the cilia. Underside much paler and brighter in colour; the costal spaces of both wings slightly darker.

Expanse of wings $1\frac{1}{10}$ inch.

Sherlock River, W. Australia (*Clement*).

Type in B. M.; three examples.

Darala rubicunda, nov.

♂. Antennæ with the shaft rosy red, the pectinations black; wings and body above and below (also the legs) of a uniform rosy-red colour, without any markings whatever, the shade of colour below being quite as bright and as dark as it is above.

Expanse of wings $1\frac{5}{10}$ inch.

Roebourne, W. Australia (*Clement*); a good series, all males.

There are five males unnamed in the B. M. from the Sherlock River, also collected by Clement, in Lymantrid drawer no. 25.

Darala pudica, nov.

♂ ♀. Antennæ of male with the shaft ochreous white, pectinations black; head, body, and wings above white, tinged with flesh-colour, in some examples tinged with pink, without any markings; in some examples the costal line of fore wings is pinkish, and so are the first two segments of the abdomen: below, the wings are more clearly suffused with pink, especially along the costal and outer borders; the veins are somewhat prominent and the legs are pinkish, but there are no markings.

Expanse of wings $1\frac{5}{10}$ inch.

Roebourne, W. Australia (*Clement*), ♂ type; a good series, all males.

Sherlock River, ♀ type in B. M.

There are six males and three females unnamed in the B. M. from the Sherlock River, Lymantrid drawer no. 25.

Marane rubricorpus, nov.

♂. Antennæ with the shaft white, plumes pale red; head, thorax, and fore wings white, suffused in parts with pale brownish ochreous: on the fore wings the interspaces below the median vein and vein 3 and also the interspace between veins 4 and 5 opposite the end of cell are pure white; three transverse thick brown lines or thin bands—subbasal, ante- and postmedial—all curving outwards a little, the antemedial band with a sharp outward angle below the costa: hind wings nearly white, unmarked, suffused with chestnut-red on the abdominal margin: abdomen dark bright chestnut-red; anal tuft white; cilia of both wings white. Underside dull white, without markings.

Expanse of wings 2 inches.

Roebourne, W. Australia (*Clement*).

Allied to *M. isabella*, White.

Family Haliadæ.

Genus COSSEDIA.

Cossedia, Walker, xxxiv. 1277 (1865).

Cossedia erateinalis.

Cossedia erateinalis, Walker, xxxiv. 1277; Swinh. Cat. Het. Mus. Oxon. ii. p. 590 (1900).

Type, Sarawak, Borneo, in O. M.

This is a Noctuid, and not a Drepanulid, as shown in Cat. Het. Mus. Oxon. The genus *Cossedia* is closely allied to Moore's genus *Chandica*, type *quadratipennis*, and should come immediately after the Acontiidæ.

Family Gonopteridæ.

Genus MOLOPA, nov.

Palpi upturned reaching as high as the vertex of the head, smoothly scaled; second joint twice as long as the first, terminal joint short, about one fifth the length of second; frons rounded; antennæ of male bipectinated for five sixths their length, the pectinations short: fore wings with the costa straight, apex acute, outer margin erect and slightly rounded; hinder margin nearly as long as the costa, curving slightly outwards to near the base, where it is bent inwards; veins 3 and 4 from lower angle of cell, 5 from just above lower angle, 6 from just below upper angle; 7, 8, and 9 stalked; 10 joined to 7 near its base, thus forming a small

areole; 11 free, 12 terminating at one third from apex: hind wing with the outer margin rounded; veins 3 and 4 from lower angle of cell, 5 from a little above the angle, 6 and 7 from upper angle.

Molopa planalis, nov.

♂ ♀. Sandy reddish ochreous, the pectinations of the antennæ in the male darker than the shaft; head, thorax, and fore wings darker than the abdomen and hind wings: the fore wings covered with very minute brown irrorations, some brown points in the costa hardly visible to the naked eye; a brownish mark at the end of the cell: hind wings with the central and basal parts palest, but without any markings. Underside with the ground-colour pale, the costa and outer margin of fore wings and the upper half of hind wings brown, striated with whitish; legs brown, tarsi whitish grey.

Expanse of wings, ♂ $\frac{9}{10}$, ♀ 1 inch.

Roebourne, W. Australia (*Clement*).

A long series of both sexes. There are one male and four females unnamed in the B. M. in Quadrifid drawer no. 200, and two males in Quadrifid drawer no. 110.

Family Trifidæ.

Caradrina cæca, nov.

♂. Head, body, and fore wings olive-brown: fore wings with subbasal and antemedial black lines; a postmedial black line, with an outward tooth below the middle, being the outer margin to a broad reddish-brown band, the inner margin of which touches the orbicular, which is in the form of a black ringlet; the line itself touches the reniform, which is like a brown figure of 8, with a whitish interior; the line divides below the reniform and makes a ring round it; there is also a subapical blackish band and a black marginal line: hind wings and abdomen dark grey, without markings.

♀. With the body and fore wings dark brown, nearly black, the orbicular and reniform of a pinkish colour; no other markings visible: hind wings a little darker grey than in the male, and also without markings.

Underside of both sexes pale grey, without any markings.

Expanse of wings, ♂ $\frac{6}{10}$, ♀ $\frac{8}{10}$ inch.

Roebourne, W. Australia (*Clement*); a long series, forty-eight males, sixty-nine females.

There are some males in the B. M. from the Sherlock River, unnamed, in drawer Trifinæ no. 194, and two males and two females in Caradrinidæ drawer 3.

Leucania præclara, nov.

♂. Head, thorax, and fore wings ochreous fawn-colour; abdomen paler, with grey segmental lines: fore wings with the interior portion semihyaline, the subcostal and median vein and veinlets prominent, giving the hyaline portion the appearance of two broad longitudinal whitish streaks; outer margin brownish, the veins prominent: hind wings white, without markings. Underside whitish, without markings, except that the subcostal and median veins and veinlets are brown.

Expanse of wings $1\frac{3}{10}$ inch.

Sherlock River, W. Australia (*Clement*).

Type in O. M.

Family Quadrifidæ.

Polydesma pullaria, nov.

♀. Head, thorax, and fore wings umber-brown, tinged with ochreous and densely irrorated with dark brown atoms, and with many small ochreous spots and places on fore wings; an antemedial, outwardly inclined, short brown band from hinder margin one fifth from base, followed by a sinuous brown shade; a black, postmedial, highly sinuous line, outwardly edged with ochreous, and with some ochreous dots on it; a similar submarginal line, which is continued across the hind wing to the anal angle, a broad brown shade on its inner side on both wings: the hind wings are pale dull greyish ochreous; a very large brown spot at the end of cell; a medial sinuous brown line in continuation of the postmedial line of fore wings, very indistinct in one example; submarginal lunules black, with whitish dots, close to the margin on both wings. Underside white; large deep black spots at end of each cell; broad, discal, outwardly curved black bands, with a sort of looped-in black ring at the end of the band on the hind wings near the anal angle.

Expanse of wings $1\frac{7}{10}$ inch.

Roebourne, W. Australia (*Clement*); two females.

Grammodes arenosus, nov.

♂. Body and wings blackish brown; abdomen with the first segment white, and the remainder with white segmental

lines: fore wings with a broad white and even band from costa before the middle to the middle of the hinder margin; a white streak on costa beyond the middle and a subapical spot connected with the costa near apex by a short white line; a whitish suffused submarginal shade, quite erect, but not reaching apex: hind wings with a broad white central fascia and a submarginal white diffused shade; marginal line of both wings brown; cilia of fore wings grey, with white tips and a dark brown interline, of hind wings the upper half white, the lower half brown. Underside white; palpi and body pure white; the wings duller, fore wings with a large brown patch on the costa beyond the middle, then a pure white broad streak, then another brown subapical patch and whitish marginal band: hind wings with two grey thin bands, central and discal; cilia as above.

Expanse of wings $1\frac{3}{10}$ inch.

Roebourne, W. Australia (*Clement*).

Acantholipes quadripuncta, nov.

♀. Pale ochreous fawn-colour: fore wings with four black linear spots in a square at the end of the cell; indications of two pale grey, outwardly curved, sinuous interior lines; a postmedial, fairly distinct similar line, outwardly acutely angled below the costa, continued across the middle of the hind wings; both wings with the outer margin broadly greyish brown, caused by three sinuous bands close together, containing on the fore wings a reddish-brown thick submarginal line, from vein 3 curving on to the apex, this short line having a pale outside edging; marginal lunules black. Underside paler, the discal line and three submarginal bands distinct.

Expanse of wings $1\frac{4}{10}$ inch.

Palawan (*Everett*).

Tathorhynchus fallax, nov.

♂ ♀. Head, thorax, and fore wings dark grey, irrorated sparsely with very minute brown atoms; costal margin brown, caused by minute brown irrorations packed together; orbicular and reniform small, white, the latter marked with black, and both connected by a black line; an erect submarginal row of spear-shaped blackish marks, with the points inwards, and edged outwardly by a line of white spots, the space beyond blackish; marginal line also black, divided by the veins; cilia dark grey: hind wings greyish white, with a suffused dark grey outer border and marginal black line;

cilia grey, with dark interline. Underside whitish; a black spot at the end of each cell: fore wings and costal space of hind wings suffused with grey; square apical black patches on both wings, with an attenuated continuous border on hind wings.

Expanse of wings $1\frac{3}{10}$ inch.

Rockbourne, W. Australia (*Clement*).

Allied to *T. vinctale*, Walker, from India, with which it is mixed up in the B. M.; but although I have examined many specimens, I have not seen one from India with the row of submarginal spear-shaped black marks on the fore wings which this form from Australia always has.

Family Focillidæ.

Rhesala mediofascia, nov.

♂. Pale ochreous fawn-colour: fore wings with a black dot in the middle of the cell and three black dots in angular form at the end; a black sinuous antemedial line running over the first dot; both wings irrorated with minute brown atoms; a black straight band, slightly suffused on its inner side, from the middle of the abdominal margin of hind wings to near apex of fore wings, where it suddenly curves round inwardly and terminates; on the inside of the band at the end of the cell of hind wings is a blackish sinuous short line; some of the irrorations collected together form an indistinct brownish thin band, submarginal on fore wings and discal on hind wings; marginal points black, but very minute. Underside slightly darker than the upperside; a black spot in middle of cell of fore wings and end of cell on hind wings; a crenellated black discal line on both wings, straight on fore wings, outwardly curved on hind wings.

Expanse of wings 1 inch.

Sarawak, Borneo.

There is an example from Borneo in the B. M. unnamed in Trifid drawer no. 210.

LXVI.—*Further Notes on the Pangoninæ of the Family Tabanidæ in the British Museum Collection.* By Miss GERTRUDE RICARDO.

[Concluded from p. 381.]

Palaearctic Region.

The following list comprises all the described species of this region. Schiner published a list of the European